

Orstech 80 / Orstech 80 H

(TECH Slab MT 4.1)
Slab of mineral wool



PRODUCT DESCRIPTION

Orstech 80 is stone wool slab, which can be manufactured with the aluminium foil facing (Orstech 80 H).



APPLICATION

The Orstech 80 slab is suitable for universal application in HVAC and industry. The slab is designed for thermal and acoustic insulation of technological equipment (square smoke extraction ducts, electrostatic precipitators, etc.) with high operating temperature.

Despite the fact that hydrophobing additives in the insulation impede the ingress of water, it is necessary to protect the slab in the construction against moisture and possible mechanical damage by a proper manner.

When exposure to high temperatures and long-term dynamic loads (vibrations), it is recommended to use a slab with higher density (min. 100 kg/m³) or a wired mat. Orstech 80 has a maximum service temperature of 640 °C according to EN 14706. If the slab is with a facing then the surface temperature must not exceed 100 °C on the facing; proper thickness of insulation must be designed to fulfil that. Binders and greasing agents in mineral wool products dissolve and evaporate in areas with temperatures > 150 °C. In the outer, colder areas, no dissolution and evaporation take place.

BENEFITS

- Excellent thermal insulation properties.
- Easy to handle, easy to cut with a sharp knife.
- AS quality – suitable for use over stainless steel.

PACKAGING, TRANSPORT, WAREHOUSING

The product is supplied as free packages or palletized. Material has to be transported in covered vehicles under such conditions to avoid moistening or other degradation.

DIMENSIONS AND PACKAGING

Thickness [mm]	Dimensions [mm]	Per package [m ²]	Package/ Pallet [pcs]	m ² / Pallet [m ²]
40	1 000 × 500	6.0	10	60
50	1 000 × 500	4.0	12	48
60	1 000 × 500	4.0	10	40
80	1 000 × 500	3.0	10	30
100	1 000 × 500	2.0	12	24

Slab can be manufactured with the aluminium foil facing (Orstech 80 H). Other thicknesses and dimensions then stated can be produced at request when fulfilling minimum volume.

TECHNICAL PARAMETERS

Parameter	Unit	Value										Standard
Thermal technical properties												
Declared value of the thermal conductivity coefficient λ_D according to EN ISO 13787	°C	50	100	150	200	250	300	400	500	600	640	
	W·m ⁻¹ ·K ⁻¹	0.041	0.047	0.055	0.065	0.076	0.089	0.118	0.155	0.201	0.220	
Measured value of the thermal conductivity coefficient according to EN 12667*	W·m ⁻¹ ·K ⁻¹	0.039	0.046	0.053	0.061	0.071	0.081	0.106	0.138	0.177	0.196	
Maximum service temperature ST(+)	°C	640 / max. 100										EN 14706
Specific heat capacity c_p *	J·kg ⁻¹ ·K ⁻¹	800										-

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TECHNICAL PARAMETERS

Parameter	Unit	Value	Standard							
Physical properties										
Density*	kg·m ⁻³	80	EN 1602, EN 13470							
Short term water absorption (W_p) WS	kg·m ⁻²	<< 1	EN ISO 29767							
Equivalent diffusion thickness of the aluminium foil s_d^*	m	> 100	EN 12086							
Longitudinal air-flow resistance Ξ^*	kPa·s·m ⁻²	> 45	EN ISO 9053-1							
Fire safety properties										
Orstech 80: Reaction to fire	-	A1	EN 13501-1							
Orstech 80H: Reaction to fire	-	A2-s1, d0	EN 13501-1							
Melting temperature t_r^*	°C	≥ 1 000	DIN 4102 part 17							
Acoustic properties										
Acoustic absorption coefficient α_p for perpendicular impact of acoustic waves (-) according to EN ISO 354 and EN ISO 11654*	Frequency	Hz	125	250	500	1 000	2 000	4 000		
	Thickness	40	mm	0.15	0.60	1.00	1.00	0.95	0.95	
		60	mm	0.35	1.00	1.00	1.00	1.00	1.00	
		80	mm	0.50	1.00	1.00	1.00	1.00	1.00	
		100	mm	0.60	1.00	1.00	1.00	1.00	1.00	
Definition of single numerical value according to EN ISO 11654*	Weighted sound absorption coefficient	-	a_w			Absorption class				
	Thickness	40	mm	0.90			A			
		60	mm	1.00			A			
		80	mm	1.00			A			
		100	mm	1.00			A			

* Informative non-declared value beyond scope of CPR, obtained by concrete tests.

1/8/2023 The information provided herein is valid at the time of publication. The manufacturer reserves the right to change the data.